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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,884	03/14/2001	Eric John Hewitt	AHA-02101	5252

28960 7590 01/30/2007
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EXAMINER

TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
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2133

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>09/808,884</p>	<p>Applicant(s)</p> <p>HEWITT ET AL.</p>	
	<p>Examiner</p> <p>Joseph D. Torres</p>	<p>Art Unit</p> <p>2133</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 23-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 1-10 and 23-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/03/2005.

This application contains claims 1-10 and 23-40 drawn to an invention nonelected with traverse in the response filed 10/03/2005. A complete reply to a final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.

Response to Arguments

2. Applicant's arguments filed 12/06/2006 have been fully considered but they are not persuasive.

The Applicant contends, "Rhines describes orthogonal interleaving and does not disclose, teach, or even suggest hyperdiagonal encoding".

The Examiner disagrees and asserts that Outer Interleaver 16 in Figure 2 of Rhines shuffles the 3-d block of C3 encoded in Figure 3 and 4A to form the hyperdiagonal planes of Figure 4B. Middle Encoder 90 in figure 2 of Rhines encodes the shuffled Hyperdiagonal planes in Figure 4B of Rhines 3 to form a block of C2 encoded shuffled

Art Unit: 2133

hyperdiagonal planes as shown in Figure 8. Since Middle Encoder 90 in Figure 2 of Rhines encodes the C3 encoded and shuffled hyperdiagonal planes to produce C2-C3 encoded shuffled hyperdiagonal planes, Middle Encoder 90 is a hyperdiagonal encoder and the 3-d block of C2-C3 encoded shuffled hyperdiagonal planes is a C2-C3 hyperdiagonal encoded codeblock since encoding a hyperdiagonal plane is hyperdiagonal coding.

The Applicant contends, "Applicants amend claim 11 to recite that at least one information bit in the row is located in a different row for the hyper set of encoded data than in the block. In contrast, Glover and Rhines both explicitly maintain row positioning".

The Examiner disagrees and asserts that at least one information bit in the R2 row in Figure 4A is in a different row for the hyperdiagonal set since the R2 row is not in the first plane in the hyperdiagonal set as it was in Figure 4A.

The Examiner disagrees with the applicant and maintains all rejections of claims 11-22. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that claims 11-22 are not patentably distinct or non-obvious over the prior art of record in view of the references, Glover; Neal et al. (US 4564945 A, hereafter referred to as Glover) in view of Rhines; Don S. et al. (US 5392299 A, hereafter referred to as Rhines) as applied in the last office action, filed 12/19/2005. Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 11-22 rejected under 35 U.S.C. 103(a) as being unpatentable over Glover; Neal et al. (US 4564945 A, hereafter referred to as Glover) in view of Rhines; Don S. et al. (US 5392299 A, hereafter referred to as Rhines).

See the Non-Final Action filed 12/19/2005 for detailed action of prior rejections.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

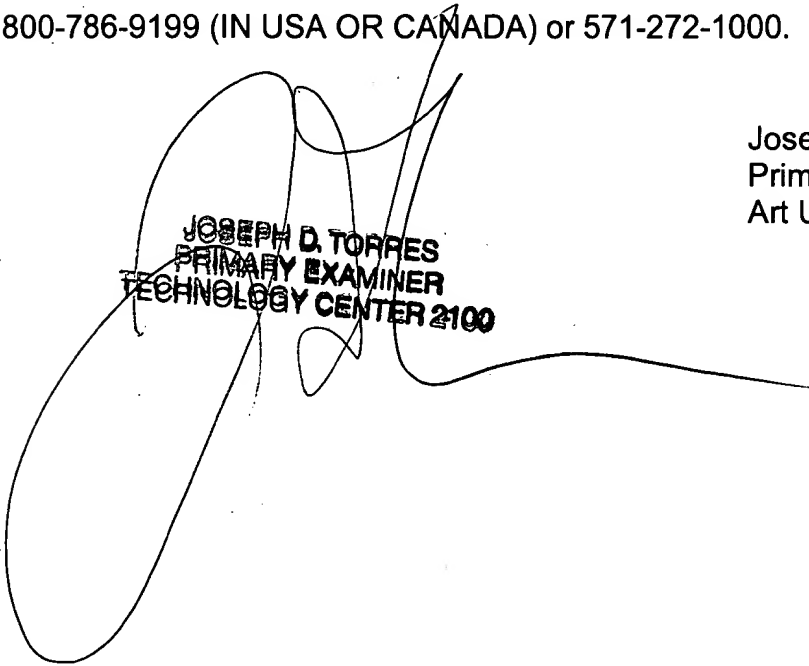
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2133

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**JOSEPH D. TORRES
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100**

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Primary Examiner
Art Unit 2133